

Patent claims

1. A device for exchanging and supplying heat, especially for a motor vehicle, with:

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- a supply means for supplying an especially gaseous medium;
- a heating means for heating at least part of the gaseous medium;
- 10 - at least one space arranged downstream of the heating means in the flow direction of the gaseous medium;
- at least two ducts for the gaseous medium which emanate from the space and which lead into at least two air conditioning zones of the interior of the motor vehicle;

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characterized in that

- in at least one of the ducts, a regulating means is provided, which regulates the quantity of the medium flowing through the duct; and
- 20 - the heating means has at least two, preferably a multiplicity of throughflow means for a second medium, at least two of these throughflow means being configured differently.

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2. The device especially as claimed in claim 1,

characterized in that

the supply means for the especially gaseous medium is a space arranged upstream of the heating means in the flow direction of the gaseous medium.

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3. The device especially as claimed in at least one of the preceding claims,

characterized in that

35 a further device for exchanging heat, especially an evaporator, is arranged in the supply means.

4. The device especially as claimed in at least one

of the preceding claims,
characterized in that

a fan is provided, which at least partially accelerates
the movement of the gaseous medium in the flow
5 direction.

5. The device especially as claimed in at least one
of the preceding claims,
characterized in that

10 the heating means has at least one second medium
flowing through it and has a plurality of supply lines
and/or discharge lines for the second medium.

6. The device especially as claimed in at least one
15 of the preceding claims,
characterized in that
the heating means has three supplies and two discharges
for the second medium.

20 7. The device especially as claimed in at least one
of the preceding claims,
characterized in that
at least one supply and/or discharge of the heating
means for the second medium has a regulating and/or
25 control means which regulates and/or controls the
quantity of the medium flowing through this supply
and/or discharge.

8. The device as claimed in at least one of the
30 preceding claims,
characterized in that
the throughflow means have a cross section in the
manner of a flat tube.

35 9. The device especially as claimed in at least one
of the preceding claims,
characterized in that
at least one of the throughflow means has at least one

curved portion.

10. The device especially as claimed in at least one of the preceding claims,

5 **characterized in that**

at least one of the throughflow means has essentially no portion curved in the longitudinal direction.

11. The device especially as claimed in at least one of the preceding claims,

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characterized in that

the heating means has at least one collecting and/or distributing means, on which at least one supply line and/or at least one discharge line is provided.

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12. The device as claimed in at least one of the preceding claims,

characterized in that

the device has two or more collecting and/or distributing means, on which all the supply and/or discharge lines are provided.

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13. The device especially as claimed in at least one of the preceding claims,

25 **characterized in that,**

in at least one of the collecting and/or distributing means, first separating means are provided, which subdivide the collecting and/or distributing spaces into at least two subspaces in a liquid-tight manner.

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14. The device especially as claimed in at least one of the preceding claims,

characterized in that

at least one collecting and/or distributing means has at least one second separating means, the surface normal of this second separating means being essentially perpendicular to the surface normal of the first separating means.

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15. The device especially as claimed in at least one of the preceding claims,

characterized in that

5 at least one of the collecting and/or distributing means has no separating means.

16. The device especially as claimed in at least one of the preceding claims,

10 **characterized in that**

three liquid streams run essentially separately from one another within the heating means.

17. The device especially as claimed in at least one of the preceding claims,

15 **characterized in that**

at least one of the throughflow means is bent or curved through an angle of essentially 180°.

18. The device especially as claimed in at least one of the preceding claims,

characterized in that

20 at least one of the throughflow means has a region of smaller thickness, in particular essentially no fluid stream taking place through this region of smaller thickness.
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19. The device especially as claimed in at least one of the preceding claims,

30 **characterized in that**

at least two of the curved throughflow means are connected to one another in one part.

20. The device especially as claimed in at least one of the preceding claims,

35 **characterized in that**

a plurality of ducts for the gaseous medium emanate from the at least one space arranged downstream of the

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heating means and lead into a plurality of air conditioning zones of the interior of the motor vehicle.

5 21. The device as claimed in at least one of the preceding claims,
characterized in that,
in at least one, preferably in each of the ducts, a regulating means is provided, which regulates the
10 quantity of the medium flowing through the duct.

22. The device especially as claimed in at least one of the preceding claims,
characterized in that
15 at least one regulating device is provided, which is not arranged in one of the ducts for the gaseous medium.

23. The device especially as claimed in at least one of the preceding claims,
20 **characterized in that,**
in the supply, at least one regulating means is provided, which regulates the quantity of the medium flowing at least through a part region of the supply
25 means.

24. The device especially as claimed in at least one of the preceding claims,
characterized in that
30 at least one regulating means is set up upstream of a predetermined region of the heating means in the flow direction of the gaseous medium.

25. The device especially as claimed in at least one of the preceding claims,
35 **characterized in that**
at least two spaces separated from one another are provided downstream of the heating means in the flow

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direction of the gaseous medium.

26. The device especially as claimed in at least one of the preceding claims,

5 **characterized in that**

a plurality of ducts emanate from each of the spaces arranged downstream of the heating means in the flow direction of the gaseous medium and lead into a plurality of air conditioning zones in the interior of
10 the motor vehicle.